

A new species of *Platymystax* (Hymenoptera: Ichneumonidae: Cryptinae: Hemigasterini) from Mexico

Новый вид рода *Platymystax* (Hymenoptera: Ichneumonidae: Cryptinae: Hemigasterini) из Мексики

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A new species of the tribe Hemigasterini, *Platymystax xalapa* sp. nov., is described from the Mexican State of Veracruz. It is the first species of the genus described from the New World. A preliminary identification key to all known seven species of *Platymystax* of the world fauna is provided.

Описан новый вид наездников-ихневмонид трибы Hemigasterini, *Platymystax xalapa* sp. nov., из мексиканского штата Веракруз. Это первый вид рода, описанный из Нового Света. Дан предварительный определительный ключ видов *Platymystax* мировой фауны.

Key words: taxonomy, key, Neotropical Region, New World, North America, new species

Ключевые слова: систематика, ключ, Неотропический регион, Новый Свет, Северная Америка, новый вид

INTRODUCTION

Hemigasterini is the smallest tribe of the subfamily Cryptinae (Ichneumonidae) comprising 26 genera with predominately Holarctic distribution (Yu et al., 2016). Neotropical fauna of Hemigasterini is very scarce being represented by only three genera: *Notocampsis* Townes, 1970 (four species, all in Brazil), *Oxytaenia* Förster, 1869 (three species in North America and one in Venezuela) and *Polytribax* Förster, 1869 (one species in Mexico). The fourth hemigasterini genus, *Platymystax* Townes, 1970, was mentioned from Belize in the molecular phylogenetic analysis of Cryptinae (Laurenne et al., 2002) but with no details. Thus, no named species of *Platymystax* was known from the New World until now.

Platymystax is a small genus with two known species in the Afrotropical region (Tosquinet, 1896): *P. asemus* (Tosquinet, 1896), *P. leucocephalus* (Tosquinet, 1896) and four species in the Oriental region (Cameron, 1904; Uchida, 1932; Sheng et al., 2013): *P. atriceps* Sheng & Sun, 2013, *P. guanshanensis* Sheng & Sun, 2013, *P. ranrunensis* (Uchida, 1932), and *P. striatifrons* (Cameron, 1904), though in the original generic description, Townes (1970) mentioned that the genus is large and has a pantropical distribution. Nothing is known about host preferences of any *Platymystax* species.

In this paper, a new species of the genus *Platymystax* is described from Mexico. It is the first species of the genus described from the New World. A preliminary identification key to seven known species of *Platymystax* is provided.

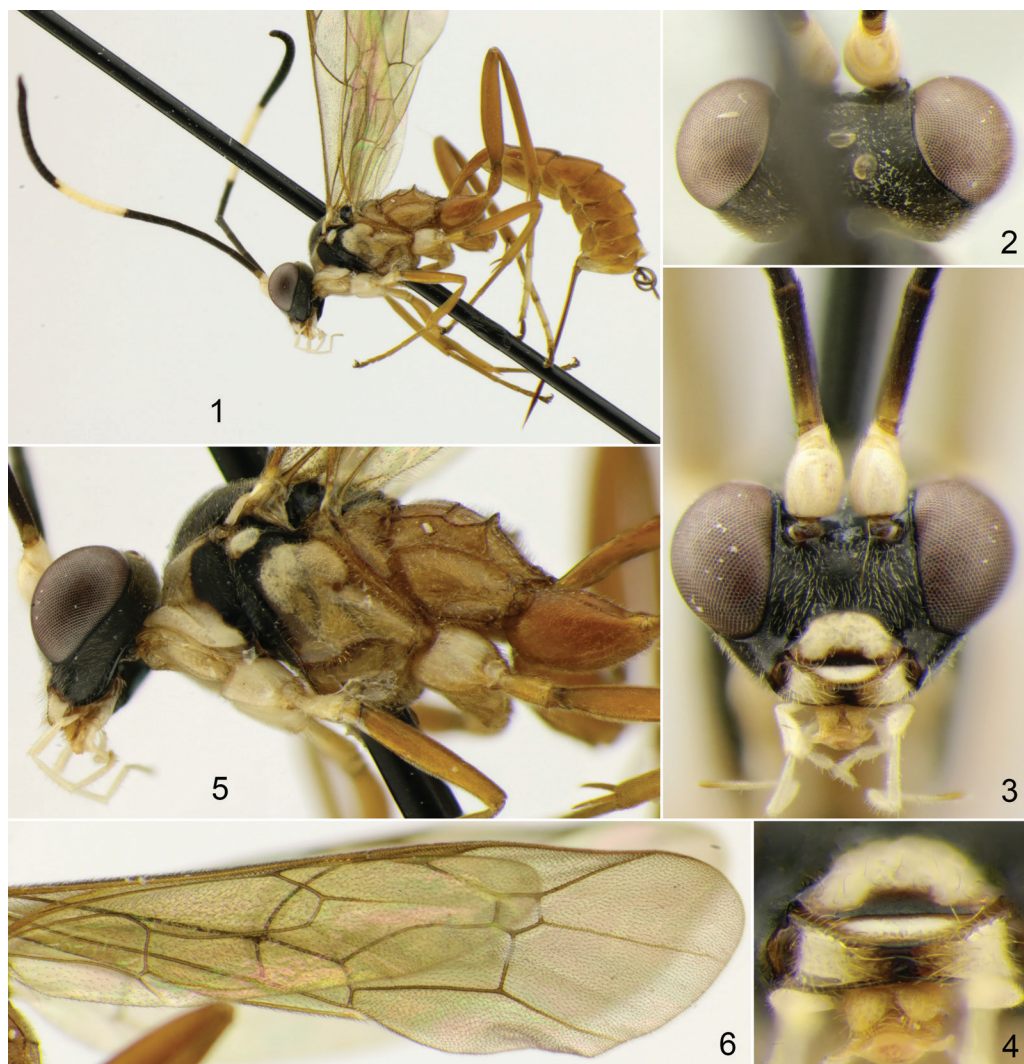
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MATERIAL AND METHODS

This work is based on a large ichneumonid material collected by M. Ortéga-Lopez in Xalapa (State of Veracruz, Mexico) by Malaise traps in 2015–2016. Holotype and one paratype of the new species are deposited in the Universidad Nacional Autónoma de México, DF, Mexico (UNAM) and one paratype in the Zoological Institute of the Russian Academy of Sciences, St Petersburg, Russia (ZIN).

The two Afrotropical and four Oriental species are known to me only from their original descriptions. Additional photographs of two species recently described from China (Sheng et al., 2013) were kindly sent to me by Mao-Ling Sheng.

Morphological terminology mainly follows those of Townes (1970). Taxonomy follows the catalogue TaxaPad (Yu et al., 2016). Layer photographs were taken in ZIN with a Canon EOS 70D digital camera attached to an Olympus SZX10 stereomicroscope,



Figs 1–6. *Platymystax xalapa* sp. nov., female, holotype. 1, habitus, lateral view; 2, head, dorsal view; 3, head, frontal view; 4, clypeus and mandibles; 5, head and metasoma, lateral view; 6, fore and hind wings.



Figs 7, 8. *Platymystax xalapa* **sp. nov.**, female, holotype (7) and male, paratype (8). 7, scutellum and propodeum, dorsal view; 8, habitus, lateral view.

and partially focused images were assembled with Helicon Focus 6 Pro software.

RESULTS

Order **HYMENOPTERA**

Family **ICHNEUMONIDAE**

Subfamily **CRYPTINAE**

Tribe **HEMIGASTERINI**

Genus ***Platymystax*** Townes, 1970

Type species: *Giraudia ranrunensis* Uchida, 1932, by original designation.

Platymystax xalapa Kasparyan
et López-Ortega, **sp. nov.**
(Figs 1–8)

Holotype. Female; **Mexico**, Veracruz, Xalapa, N 19°30', W 96°55', 1279 m, Malaise trap, 20.VIII–17.IX.2015, coll. M. López-Ortega (UNAM).

Paratypes. Same data as for holotype except dates: 25.VII–7.VIII.2015, 1 male (UNAM); 20.IX–2.X.2015, 1 female (ZIN).

Etymology. The name of the new species refers to its type locality, Xalapa in Mexico.

Comparative diagnosis. *Platymystax xalapa* **sp. nov.** can easily be distinguished from all other species in this genus by its colour pattern: black head (except for white clypeus, scape and mandible) and mesoscutum, completely rufous propodeum and metasoma, and predominantly whitish pronotum with large postero-lateral spot (Figs 1, 8). See also identification key to species of *Platymystax* below.

Description. *Female (holotype).* Fore wing 7.0 mm long. Antenna with 27 flagellomeres; flagellum about 1.1 times as long as fore wing. Flagellomeres 1–4 subequal in length, 4.5–5.0 times as long as wide; flagellomeres 1 and 2 combined 1.4 times as long as maximum diameter of eye; flagellomeres 13–25 flattened ventrally and somewhat widened; flagellomeres 15–19 about 1.5 times as wide as basal ones. Head in dorsal view strongly narrowed behind eyes (Fig. 2). Clypeus rather flat and high, its lower margin truncate and sharp (Figs 3, 4). Two apical segments of maxillary palpi

combined as long as maximum diameter of eye. Mandible rather narrow, lower tooth much smaller than the upper. Malar space 0.8 times as long as basal mandibular width. Occipital carina complete, joining hypostomal carina at distance subequal to basal width of mandible.

Head, mesosoma and metasoma smooth with fine punctures and with rugosity only on pleural and apical areas of propodeum. Epomia strong and moderately long. Notaulus sharp in anterior 0.4 of mesoscutum. Sternaulus sharp, sinuate, ending before middle coxa, crenulate in anterior half. Propodeum with strong carinae; basal area widened anteriorly, narrow posteriorly; areola elongate; costulae strong; apophysis present, depressed (Fig. 5). Fore wing with large areolet receiving second recurrent vein (2m-cu) slightly basad its middle (Fig. 6). Nervulus (cu-a) interstitial. Hind wing with nervellus (cu1&cu-a) intercepted at lower 0.15. Legs slender (Fig. 1). Hind femur 8.0 times as long as wide. Proportion of tarsomeres of hind leg 11: 4.6: 3: 1.2: 2.6 (second tarsomere 1.75 times as long as the apical one).

Tergite 1 of metasoma slender, without median longitudinal carina, its dorsolateral margin more or less rounded on petiole and angulate on postpetiole beyond spiracle. Tergites more or less polished with rather dense pubescence. Thyridium moderately large, circular, separated from base of tergite 2 by the distance of its own diameter. Ovipositor straight, slender (Fig. 1), its apical part beyond the nodus 0.8 times as long as second tarsomere of hind tarsus. Ovipositor sheath about 0.8 times as long as hind tibia.

Antenna black with scape (except for extreme base), pedicel and flagellomeres 6 to 10–11 white. Head black; clypeus whitish with blackish lower margin; mandible (except for teeth), labrum and palpi white (Figs 2–5). Prothorax white; pronotum with large black marking posterolaterally (Fig. 5). Mesonotum black, posterolateral carina of mesoscutum weakly white-marked, scutellum dorsally white.

Mesopleuron whitish with black upper and anterior margins; subtegular ridge white; epimeron and mesosternum pale fulvous (Fig. 5). Metathorax (except for white apex of postscutellum) and propodeum completely pale rufous. Legs pale rufous; fore and middle coxae, fore trochanter, apical 0.4 of hind basitarsus and complete hind tarsomeres 2–4 white. Metasoma entirely pale rufous.

Male. Fore wing 7.0 mm long. Antenna with 27–28 flagellomeres (number of flagellomeres differing on right and left antennae on only available male specimen). Flagellomeres 1–5 subequal in length, 3.5–4.5 times as long as wide. Flagellomeres 1 and 2 combined 1.15 times as long as maximum diameter of eye; median flagellomeres unspecialized (neither widened, nor flattened ventrally). Tyloids absent. Apophysis reduced. Hind tarsus with second tarsomere 2.3 times as long as tarsomere 5. Colour pattern of male similar to those of female, but flagellomeres 1 and 2 reddish brown ventrally, and antenna with white ring on flagellomeres 9 to 15; hind basitarsus almost entirely pale rufous.

Preliminary key to world species of *Platymystax*

1. Body predominantly black 2
- Body predominantly pale rufous 3
2. Metasoma black with “basal third and mark in the centre of the 1st abdominal segment, almost the apical half of the second and apical two segments clear white” (Cameron, 1904: 120). Legs pale testaceous, hind coxa black, femora and tibiae dark brownish, femora black above, hind tarsi white, the basal two-thirds of first and last joints blackish. – India *P. striatifrons*
- Metasoma black with two basal tergites reddish and base of tergite 1 yellowish; apex of metasoma white. Legs reddish with white fore and middle coxae, fore and middle trochanters, and the middle part of hind tarsus. – Taiwan *P. ranrunensis*
3. Head, in dorsal view, behind eyes with temples convex, subparallel or hardly narrowed. Face and orbits white; occiput black. Body

- rufous. – Afrotropical region
 ***P. asemus*, *P. leucocephalus***
- Head, in dorsal view, behind eyes with temples strongly narrowed (Fig. 2). Face black or with central white spot; orbits and occiput black. Body predominantly rufous with black markings 4
4. Clypeus brownish black. Mesosoma and tergites 1–3 entirely reddish brown; tergites 4–6 more or less entirely black; tergites 7 and 8 with broad white bands posteriorly. – China (Jiangxi) ***P. atriceps***
- Clypeus entirely or extensively white (Figs 3, 4). Mesosoma with black markings on pronotum, mesoscutum and sometimes also on mesopleuron; tergites 2 and 3 sometimes black in basal halves; tergites 4–6 fulvous or brownish rufous; tergites 7 and 8 without white markings apically 5
5. Face with large median longitudinal white spot; scape and pedicel brownish. Pronotum black with anterior margin narrowly white. Fore wing with veins 2rs-m and 3rs-m distinctly convergent anteriorly. Propodeal apophysis weak, inconspicuous. Mesopleuron more or less uniformly orange-brown (except white subtegular ridge). Basal halves of tergites 2 and 3 black. – China (Jiangxi)
 ***P. guanshanensis***
- Face entirely black; scape and pedicel entirely white (Fig. 3). Pronotum anteriorly and dorsally extensively white (Figs 5, 8). Fore wing with vein 2rs-m parallel to 3rs-m (Fig. 6). Propodeum with distinct apophysis. Mesopleuron predominantly white, with black narrow markings dorsally and anteriorly (Fig. 5). Metasoma completely pale fulvous (Figs 1, 8). – Mexico ***P. xalapa* sp. nov.**

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